

**Before the
Federal Communication Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of Part 97 of the Commission's Rules)	WT Docket No. 04-140
Governing the Amateur Radio Services)	
)	
Amendment of Section 97.305(c) to Authorize)	
Image Emissions in Additional High Frequency)	
Segments)	
)	

Comments of the Jan A. Tarsala

Introduction

1. I make these Comments as a practicing microwave engineer at a Federally-Funded Research and Development Center with a Master of Science in Electrical Engineering degree; as a holder of a General Radiotelephone Operator's License and former broadcasting Chief Engineer; and as an Extra Class Amateur Radio licensee and Official Observer in the Amateur Auxiliary to the Federal Communications Commission. My 29 years of professional experience, graduate-level college engineering education, and 37 years in amateur radio provide me with the analytical and practical background to provide Comments to this Notice of Proposed Rulemaking.

Comments

2. The Commission has proposed in Paragraphs 15 and 16 of the Proposed Rulemaking to modify the text of 47 CFR 97.3(c)(2) to accomodate facsimile transmission in the Data segments of the high frequency (HF) Amateur Service bands in response to the Miller Petition. The Commission is correct that emission A1C is commonly used, but it has erred in additionally specifying emission F2C. The correct designation for the commonly used MFSK16 image transmission mode is emission F1C. That MFSK16 image transmission is F1C can be easily demonstrated by an examination of its signal, for unlike an F2 emission, there is no symmetrical pairing of sidebands on either side of its emission center (where the carrier frequency is located) as would arise from the use of a subcarrier. The correct and complete emission designator for this popular mode of image transmission in the HF Data segments is 316HF1C.

3. However, having corrected the Commission on this technicality, the amendment proposed is unreasonably restrictive. An examination of the three editions of *ARRL's HF Digital Handbook* by Steve Ford, dated 1999, 2001, and 2004 respectively, demonstrates a rapid development of HF digital techniques by radio amateurs. What is striking, however, is how frequently new techniques are being developed by radio amateurs in countries other than the United States. This suggests the current regulations in Part 97 regarding data emissions are restricting experimentation by American amateur radio operators, while regulations in other countries are more flexible and responsive. This stifling of technical experimentation runs counter to the Basis and Purpose of the Amateur Service given in 47 CFR 97.1(b).

3. Therefore, in response to the Miller Petition, the Commission should adopt an alternative wording for 47 CFR 97.3(c)(2) modelled after its own wording in 97.113(e):

(2) Data. Computer communications, including incidental image communications, telemetry, and telecommand emissions having designators with A, C, D, F, G, H, J, or R as the first symbol; 1 as the second symbol; D as the third symbol; and emission J2D. Only a digital code of a type specifically authorized in this part may be transmitted.

Use of the phrase *including incidental image communications* should satisfy the petition of Mr. Miller while not restricting technical development by American amateur radio operators to only two specific emission types. The use of the word *incidental* deliberately acknowledges that the transmission of image communications in a Data segment of an HF band is secondary, and is associated with, computer, telemetry, or telecommand communications.

Respectfully submitted this Fifteenth Day of June, 2004.

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